AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Please replace the claims with the following version:

1. (original): An optical pickup apparatus enabling to read information of a plurality of recording mediums having different reading wavelengths from each other, comprising:

a light emission part including a first light emission source for emitting a first laser beam and a second light emission source for emitting a second laser beam having a wavelength different from that of the first laser beam, the second light emission source integrally formed with the first light emission source and placed adjacent to the first light emission source, the light emission part controlled to selectively emit the first or second laser beam as a laser beam;

a grating for generating a pair of sub-beams from the laser beam;

a hologram for generating first high-order beams from the laser beam reflected by a recording medium and second high-order beams from the pair of the sub-beams reflected by the recording medium; and

a light receiving part for receiving the first and second high-order beams to generate a reading signal, a focus error signal, and a tracking error signal.

2. (original): The optical pickup apparatus according to claim 1 wherein the focus error signal is generated by a beam size method; and

the tracking error signal is generated by a three-beam method.

3. (original): The optical pick up apparatus according to claim 1, wherein the light receiving part comprises:

a pair of three-division light receiving elements; and

two pairs of sub-beam receiving elements;

the pair of three-division light receiving elements receive the first high-order beams to generate the reading signal and the focus error signal; and

the two pairs of sub-beam light receiving elements are provided by one pair with respect to each of the three-division light receiving elements, and receive the second high-order beams to generate the tracking error signal.

4. (original): The optical pickup apparatus according to claim 3, wherein each of the three-division light receiving elements is divided into three light receiving regions by two parallel division lines; and

each pair of the sub-beam light receiving elements is aligned and placed in a direction perpendicular to the division lines of the three-division light receiving elements.

5. (original): The optical pickup apparatus according to claim 4, wherein the light emission part is placed so that a straight line connecting light emission points of the first and

second light emission sources is parallel to the division lines of the three-division light receiving element.

6. (original): The optical pickup apparatus according to claim 4, wherein the hologram is placed so that a straight line connecting incident points of the first high-order beams onto the light receiving part is parallel to the division lines of the three-division light receiving elements.

7. (original): The optical pickup apparatus according to claim 4, wherein the grating is placed so that a straight line connecting the pair of sub-beams is perpendicular to the division lines of the three-division light receiving elements.

8. (original): The optical pickup apparatus according to claim 1, wherein the light receiving part comprises:

a first pair of three-division light receiving elements;

a second pair of three-division light receiving elements;

a first pair of sub-beam light receiving elements; and

a second pair of sub-beam light receiving elements;

when the first laser beam is emitted from the light emission part as the laser beam,

the first pair of the three-division light receiving elements receive the first high-order beams to generate the reading signal and the focus error signal;

the first pair of the sub-beam light receiving elements receive the second high-order beam generated from one of the pair of the sub-beams;

the second pair of the three-division light receiving elements receive the second high-order beams generated from the other of the pair of sub-beams; and

the first pair of the sub-beam light receiving elements and the second pair of the three-division light receiving elements generate the tracking error signal; and

when the second laser beam is emitted from the light emission part,

the first pair of the three-division light receiving elements receive the second high-order beams generated from one of the pair of the sub-beams;

the second pair of the three-division light receiving elements receive the first high-order beams to generate the reading signal and the focus error signal;

the second pair of the sub-beam light receiving elements receive the second high-order beams generated from the other of the pair of sub-beams; and

the first pair of the three-division light receiving elements and the second pair of the sub-beam light receiving elements generate the tracking error signal.

9. (original): The optical pickup apparatus according to claim 8, wherein the light emission part is placed so that a straight line connecting light emission points of the first and second light emission sources is perpendicular to a surface on which the light receiving part is provided.

10. (original): The optical pickup apparatus according to claim 1, wherein the light receiving part comprises:

a pair of four-division light receiving elements for receiving the first high-order beams to generate the reading signal and the focus error signal; and

two pairs of sub-beam light receiving elements provided by one pair with respect to each of the pair of the four-division light receiving elements, the two pairs of sub-beam light receiving elements for receiving the second high-order beams to generate the tracking error signal,

the first high-order beams are received by continuous three light receiving regions of the four-division light receiving elements; and

the continuous three light receiving regions for receiving the first high-order beams generated from the first laser beam are different in part from those for receiving the first high-order beams generated from the second laser beam.

11. (original): The optical pickup apparatus according to claim 10, wherein the light emission part is placed so that a straight line connecting light emission points of the first and second light emission sources is perpendicular to a surface on which the light receiving part is provided.

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12. (new): An optical pickup, comprising:

a light source that emits a first light beam;

a grating that generates a first sub-beam and a second sub-beam from the first light beam, wherein the first light beam, the first sub-beam, and the second sub-beam reflect off of a recording medium as a reflected first light beam, a reflected first sub-beam, and a reflected second sub-beam, respectively;

a hologram that generates a first beam and a second beam from the reflected first light beam, that generates a third beam and a fourth beam from the reflected first sub-beam, and that generates a fifth beam and a sixth beam from the reflected second sub-beam; and

a detector that detects the first beam, the second beam, the third beam, the fourth beam, the fifth beam, and the sixth beam.

13. (new): The optical pickup as claimed in claim 12, wherein the detector generates a focus error signal and a tracking error signal based on the first beam, the second beam, the third beam, the fourth beam, the fifth beam, and the sixth beam.

14. (new): The optical pickup as claimed in claim 13, wherein the tracking error signal is determined based on the third beam, the fourth beam, the fifth beam, and the sixth beam.

15. (new): The optical pickup as claimed in claim 14, wherein the tracking error signal is determined based on a difference between a sum of the third beam and the fourth beam and a sum of the fifth beam and the sixth beam.

16. (new): The optical pickup as claimed in claim 13, wherein the focus error signal is determined based on the first beam and the second beam.

17. (new): The optical pickup as claimed in claim 16, wherein the detector comprises a first photodetector, a second photodetector, a third photodetector, a fourth photodetector, a fifth photodetector, and a sixth photodetector,

wherein the first photodetector, the second photodetector, and the third photodetector detect the first beam, and

wherein the fourth photodetector, the fifth photodetector, and the sixth photodetector detect the second beam.

18. (new): The optical pickup as claimed in claim 17, wherein the focus error signal is determined based on a difference between a sum of outputs of the first photodetector, the third photodetector, and the fifth photodetector and a sum of outputs of the second photodetector, the fourth photodetector, and the sixth photodetector.

19. (new): The optical pickup as claimed in claim 17, wherein the detector comprises a seventh photodetector, an eight photodetector, a ninth photodetector, and a tenth photodetector, and

wherein the seventh photodetector detects the third beam, the eighth photodetector detects the fifth beam, the ninth photodetector detects the fourth beam, and the tenth photodetector detects the sixth beam.

20. (new): The optical pickup as claimed in claim 19, wherein the first photodetector, the second photodetector, the third photodetector, the fourth photodetector, the fifth photodetector, the sixth photodetector, the seventh photodetector, the eighth photodetector, the ninth photodetector, and the tenth photodetector are formed on the same substrate.

21. (new): The optical pickup as claimed in claim 20, wherein the first photodetector, the second photodetector, the third photodetector, the seventh photodetector, and the eighth photodetector are aligned on one side of the substrate, and

wherein the fourth photodetector, the fifth photodetector, the sixth photodetector, the ninth photodetector, and the tenth photodetector are aligned on an opposite side of the substrate.

22. (new): The optical pickup as claimed in claim 12, wherein the light source emits a second light beam,

wherein the grating generates a third sub-beam and a fourth sub-beam from the second light beam, wherein the second light beam, the third sub-beam, and the fourth sub-beam reflect off of a recording medium as a reflected second light beam, a reflected third sub-beam, and a reflected fourth sub-beam, respectively,

wherein the hologram generates a seventh beam and a eighth beam from the reflected second light beam, that generates a ninth beam and a tenth beam from the reflected third sub-beam, and that generates a eleventh beam and a twelfth beam from the reflected fourth sub-beam, and

wherein the detector detects the seventh beam, the eighth beam, the ninth beam, the tenth beam, the eleventh beam, and the twelfth beam.

23. (new): The optical pickup as claimed in claim 22, wherein the light source comprises a first laser that emits the first light beam at a first wavelength and comprises a second laser that emits the second light beam at a second wavelength,

wherein the first wavelength is different than the second wavelength, and

wherein the first laser is integrally formed with the second laser.

24. (new): The optical pickup as claimed in claim 22, wherein the detector comprises:

a first photodetector that detects the first beam and the seventh beam;

a second photodetector that detects the second beam and the eighth beam;

a third photodetector that detects the third beam and the ninth beam;

a fourth photodetector that detects the fourth beam and the tenth beam;

a fifth photodetector that detects the fifth beam and the eleventh beam; and

a sixth photodetector that detects the sixth beam and the twelfth beam.

25. (new): The optical pickup as claimed in claim 24, wherein the first photodetector, the second photodetector, the third photodetector, the fourth photodetector, the fifth photodetector, and the sixth photodetector are formed on the same substrate.

26. (new): The optical pickup as claimed in claim 25, wherein the first photodetector, the third photodetector, and the fifth photodetector are aligned on one side of the substrate, and

wherein the second photodetector, the fourth photodetector, and the sixth photodetector are aligned on an opposite side of the substrate.

27. (new): The optical pickup as claimed in claim 25, wherein the light source comprises a first laser that emits the first light beam at a first wavelength and comprises a second laser that emits the second light beam at a second wavelength,

wherein the first wavelength is different than the second wavelength, and

wherein the first laser is integrally formed with the second laser.

28. (new): The optical pickup as claimed in claim 27, wherein a first line is substantially perpendicular to a direction in which the first photodetector, the third photodetector, and the fifth photodetector are aligned on the one side of the substrate,

wherein the first line intersects both the first photodetector and the second photodetector,

wherein a first axis of the first laser beam and a second axis of the second laser beam is substantially perpendicular to a surface of a recording medium processed by the optical pickup, and

wherein a second line intersects the first axis and the second axis.

29. (new): The optical pickup as claimed in claim 28, wherein the first laser and the second laser are formed such that the first line is substantially parallel to the second line.

30. (new): The optical pickup as claimed in claim 28, wherein the first laser and the second laser are formed such that the first line is substantially perpendicular to the second line.

31. (new): The optical pickup as claimed in claim 28, wherein the first laser and the second laser are formed such that the first line is obliquely oriented with respect to the second line.

32. (new): The optical pickup as claimed in claim 22, wherein the detector comprises a first photodetector, a second photodetector, a third photodetector, a fourth photodetector, a fifth photodetector, a sixth photodetector, a seventh photodetector, and an eight photodetector,

wherein the first photodetector detects the first beam and the ninth beam,

wherein the second photodetector detects the second beam and the tenth beam,

wherein the third photodetector detects the third beam,

wherein the fourth photodetector detects the fourth beam,

wherein the fifth photodetector detects the fifth beam and the seventh beam,

wherein the sixth photodetector detects the sixth beam and the eighth beam,

wherein the seventh photodetector detects the eleventh beam, and

wherein the eighth photodetector detects the twelfth beam.

33. (new): The optical pickup as claimed in claim 32, wherein the first photodetector comprises a first sub-detector, a second sub-detector, and a third sub-detector,

wherein the second photodetector comprises a fourth sub-detector, a fifth sub-detector, and a sixth sub-detector, and

wherein a first focus error signal is determined based on a difference between a sum of outputs of the first sub-detector, the third sub-detector, and the fifth sub-detector and a sum of outputs of the second sub-detector, the fourth sub-detector, and the sixth sub-detector when the first light beam is emitted.

34. (new): The optical pickup as claimed in claim 33, wherein the fifth photodetector comprises a seventh sub-detector, an eighth sub-detector, and a ninth sub-detector,

wherein the sixth photodetector comprises a tenth sub-detector, an eleventh sub-detector, and a twelfth sub-detector, and

wherein a second focus error signal is determined based on a difference between a sum of outputs of the seventh sub-detector, the ninth sub-detector, and the eleventh sub-detector and a sum of outputs of the eighth sub-detector, the tenth sub-detector, and the twelfth sub-detector when the second light beam is emitted.

35. (new): The optical pickup as claimed in claim 34, wherein a first tracking signal is determined based on a difference between a sum of outputs of the third photodetector and the fourth photodetector and a sum of outputs of the fifth photodetector and the sixth photodetector when the first light beam is emitted, and

wherein a second tracking signal is determined based on a difference between a sum of outputs of the first photodetector and the fourth photodetector and a sum of outputs of the seventh photodetector and the eighth photodetector when the second light beam is emitted.

36. (new): The optical pickup as claimed in claim 22, wherein the detector comprises a first photodetector, a second photodetector, a third photodetector, a fourth photodetector, a fifth photodetector, a sixth photodetector, a seventh photodetector, an eight photodetector, a ninth photodetector, a tenth photodetector, an eleventh photodetector, and a twelfth photodetector,

wherein the first photodetector detects the third beam and the ninth beam,

wherein the second photodetector detects the fourth beam and the tenth beam,

wherein the third photodetector, the fifth photodetector, and the seventh photodetector detect the first beam,

wherein the fourth photodetector, the sixth photodetector, and the eighth photodetector detect the second beam,

wherein the fifth photodetector, the seventh photodetector, and the ninth photodetector detect the seventh beam,

wherein the sixth photodetector, the eighth photodetector, and the tenth photodetector detect the eighth beam,

wherein the eleventh photodetector detects the fifth beam and the eleventh beam, and

wherein the twelfth photodetector detects the sixth beam and the twelfth beam.

37. (new): The optical pickup as claimed in claim 36, wherein a first focus error signal is determined based on a difference between a sum of outputs of the third photodetector, the sixth photodetector, and the sixth photodetector and a sum of outputs of the fourth photodetector, the fifth photodetector, and the seventh photodetector when the first light beam is emitted.

38. (new): The optical pickup as claimed in claim 37, wherein a second focus error signal is determined based on a difference between a sum of outputs of the fifth photodetector, the ninth photodetector, and the eighth photodetector and a sum of outputs of the sixth photodetector, the seventh photodetector, and the tenth photodetector when the second light beam is emitted.

39. (new): The optical pickup as claimed in claim 38, wherein a first tracking signal is determined based on a difference between a sum of outputs of the first photodetector and the second photodetector and a sum of outputs of the eleventh photodetector and the twelfth photodetector when the first light beam is emitted, and

wherein a second tracking signal is determined based on a difference between a sum of outputs of the first photodetector and the second photodetector and a sum of outputs of the eleventh photodetector and the twelfth photodetector when the second light beam is emitted.